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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/686,564	10/17/2003	Junichi Kojima	244164US3	8985

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ALEXANDRIA, VA 22314

EXAMINER

TADESSE, YEWEBDAR T

ART UNIT	PAPER NUMBER
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1734

DATE MAILED: 01/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n N .

10/686,564

Applicant(s)

KOJIMA, JUNICHI

Examiner

Yewebdar T Tadesse

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10/17/2003.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1-3, 5-9 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baba et al (US 6,770,319) in view of Yamauchi et al (US 6,071,346). As to claims 1-2, Baba et al discloses (see Fig 3) a resin coating apparatus (capable of applying paste) comprising a container (syringe 16) storing resin (capable of storing paste material) and having a nozzle (16b) for applying the resin (capable of applying paste) material to the substrate; a stage (44) to mount the substrate thereon; a holding mechanism (retaining portion 18) to hold the container; a moving mechanism (drive portion 30 with motor 34 and motive source) enabling the nozzle held by the retaining portion or the stage to move relative to each other and a discharge volume control unit (controller 14) connected to the container (syringe 16) held by holding mechanism

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(retaining portion 18) through a pipe (compressed air line 24) controlling the discharge rate of resin. Baba et al further teaches that the empty syringe is replaced with a new syringe (see column 7, lines 16-20). However, a delivery mechanism for transferring the container (syringe) to and from the holding mechanism or discharge volume control unit and a controller for controlling the transferring operation (connecting and disconnecting operation) of the delivery (attaching and detaching) mechanism is not taught in Baba et al. Yamauchi et al discloses (see Fig 1 and column 32, lines 45-49) detachable container (cartridges 2), a delivery mechanism (carrier 4) for transferring the container (2) to and from the holding mechanism (loading area 50) and a controller (90) for controlling the transferring operation (connecting-and disconnecting operation of the attaching and detaching mechanism) of the delivery mechanism (carrier 4), and paint feeding mechanism (5). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a delivery mechanism for transferring a detachable container to and from the holding mechanism or the discharge volume control unit and a controller for controlling the transferring operation of the delivery mechanism in Baba et al system to efficiently apply variety of resins on the substrate. As to claims 3 and 5-7, Baba et al lacks teaching a controller controlling the delivery mechanism to load a container filled up with the resin material to the holding mechanism while receiving an empty container from the holding mechanism; a delivery mechanism carrying two containers simultaneously, the container filled up with the paste material and the empty container separately and a stocker. Yamauchi et al discloses (see Fig 1 and column 4, lines 37-49) as a delivery mechanism (carrier 4

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having two chuck means 32a & 32b) carrying simultaneously two containers filled up with the paste material and the empty (used) container separately; a controller for controlling the delivery mechanism to load a container filled up with paint and picking up an empty (used paint cartridge) and a stocker (stock unit 3) arranged in the vicinity of the painting system. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a controller controlling the delivery mechanism to load a container filled up with the paste material to the holding mechanism while receiving an empty container from the holding mechanism; a delivery mechanism carrying two containers simultaneously, the container filled up with the paste material and the empty container separately and a stocker in the vicinity in the system of Baba et al to speed up the loading and unloading operations of the container (syringe). As to claims 8-9, Baba et al lacks teaching a controller constructed on a basis of consumption of the coating material and adapted to count the number of substrates. With the appropriate programming instructions, Yamauchi et al controller is capable of carrying out the transferring operation based on the consumption of the coating material and the number of substrate and the delivery mechanism in communication with the controller is capable of successively starting the transferring operation of the containers. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a controller constructed on a basis of consumption of the coating material and adapted to count the number of substrates to efficiently apply the coating material. As to claim 12, Baba et al's container (syringe 16) is capable of storing an ultraviolet cure paste (resin) material.

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4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Baba et al (US 6,770,319) in view of Yamauchi et al (US 6,071,346) as applied to claim 1 above, and further in view of Yoshida et al (US 6,284,047). Baba et al discloses (see column 7, lines 7-13 and Fig 3) a cylindrical container (syringe) having an end where the nozzle arranged coaxially, the cylindrical container having an abutment surface directing upwardly and an engagement surface directing downwardly and a pipe (24) detachably connected to the cylindrical container. Baba et al lacks teaching a holding mechanism including a grasping part having a holder-step part and a stopper. Yamauchi et al discloses a holding mechanism including a grasping part (loading area 50 having grasping parts). Yoshida et al discloses feeder unit (29) having an end where the nozzle (inner tube 34) is arranged coaxially and holder means (mounting portion 16) including a stopper (lock device 53). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include an arrangement wherein a holding mechanism including a grasping part having a holder-step part, a stopper in Maeda et al to retain the container (syringe) in proper position and replace the feeder unit (syringe) in simplified manner.

5. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Baba et al (US 6,770,319) in view of Yamauchi et al (US 6,071,346) as applied to claim 1 above, and further in view of Scheeres (US 5,240,656). Baba et al as modified by Yamauchi et al lacks teaching a disposal device where a used container is scrapped. Scheeres discloses (see Fig 1 and column 4, lines 4-18) a disposal device (an apparatus for treating used container, such as waste syringes or plastic packaging disposed in the

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manufacturing area). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a disposal device in Baba et al device as modified by Yamauchi et al to reduce the volume of waste. Yamauchi et al's delivery mechanism (carrier 4 having two chuck means 32a & 32b) is capable of scraping the used container (syringe) into the disposal device such as shown by Scheeres.

6. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Baba et al (US 6,770,319) in view of Yamauchi et al (US 6,071,346) as applied to claim 1 above, and further in view of Scheeres (US 5,240,656) as applied to claim 10 above, and further in view of applicant's admitted art (see applicant's specification, page 2, paragraph 2). Baba et al as modified lacks teaching a supply device with a freezer and a constant temperature bath. Admitted art (see applicant's specification, page 2, paragraph 2) teaches that in handling UV cured sealant material with a syringe, the material is stored in frozen storage until request of use and the paste material is then defrosted in atmosphere of from 20°C -25°C in a constant temperature bath. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a supply device with a freezer and a constant temperature bath in Baba et al device as modified to prevent contamination of the coating material.

7. Claims 1-3, 5-9 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maeda et al (US 4,692,351) in view of Yamauchi et al (US 6,071,346). As to claims 1-2, Maeda et al discloses (see Figs 1-2 and 4) a paste application apparatus comprising a container (tank 13) storing paste material and

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having a nozzle (1) for applying the paste material to the substrate; a stage (3) to mount the substrate thereon; a holding mechanism (see Fig 2 connection of the arm 14, bar 15 and pipe 11 with the tank 13) to hold the container; a moving mechanism (X-Y drive table 4) enabling the nozzle held by the holding mechanism (pipe 11, arm 14 and bar 15) to move relative to the substrate and a discharge volume control unit (discharge pump 12 in communication with the controller 21) connected to the container (13) held by holding mechanism through a pipe (11) controlling the discharge rate of paste.

Maeda et al lacks teaching a delivery mechanism for transferring the container to and from the holding mechanism or discharge volume control unit and a controller for controlling the transferring operation (connecting and disconnecting operation) of the delivery (attaching and detaching) mechanism. It is also unclear in Maeda et al that the container (tank) is held detachably within the holding mechanism. However, it is well known in the art to detachably connect a coating material supply source in the system for application of coating to selectively feed the desired coating material to the application device. For instance, Yamauchi et al discloses (see Fig 1 and column 32, lines 45-49) detachable container (cartridges 2), a delivery mechanism (carrier 4) for transferring the container (2) to and from the holding mechanism (loading area 50) and a controller (90) for controlling the transferring operation (connecting-and disconnecting operation of the attaching and detaching mechanism) of the delivery mechanism (carrier 4), and paint feeding mechanism (5). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a delivery mechanism for transferring a detachable container to and from the holding mechanism or the discharge

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volume control unit and a controller for controlling the transferring operation of the delivery mechanism in Maeda et al system to efficiently apply variety of pastes on the substrate by eliminating cleaning up time of the container storing paste material. As to claims 3 and 5-7, Maeda et al lacks teaching a controller controlling the delivery mechanism to load a container filled up with the paste material to the holding mechanism while receiving an empty container from the holding mechanism; a delivery mechanism carrying two containers simultaneously, the container filled up with the paste material and the empty container separately and a stocker. Yamauchi et al discloses (see Fig 1 and column 4, lines 37-49) as a delivery mechanism (carrier 4 having two chuck means 32a & 32b) carrying simultaneously two containers filled up with the paste material and the empty (used) container separately; a controller for controlling the delivery mechanism to load a container filled up with paint and picking up an empty (used paint cartridge) and a stocker (stock unit 3) arranged in the vicinity of the painting system. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a controller controlling the delivery mechanism to load a container filled up with the paste material to the holding mechanism while receiving an empty container from the holding mechanism; a delivery mechanism carrying two containers simultaneously, the container filled up with the paste material and the empty container separately and a stocker in the vicinity in Maeda et al to speed up the loading and unloading operations of the container (tank). As to claims 8-9, Maeda et al lacks teaching a controller constructed on a basis of consumption of the coating material and adapted to count the number of substrates. With the appropriate

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programming instructions, Yamauchi et al controller is capable of carrying out the transferring operation based on the consumption of the coating material and the number of substrate and the delivery mechanism in communication with the controller is capable of successively starting the transferring operation of the containers. As to claim 12, Maeda et al' container (tank13) is capable of storing an ultraviolet cure paste material.

8. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maeda et al (US 4,692,351) in view of Yamauchi et al (US 6,071,346) as applied to claim 1 above, and further in view of Yoshida et al (US 6,284,047). Maeda et al lacks teaching a cylindrical container having an end where the nozzle is arranged coaxially with abutment and engagement surfaces, a holding mechanism including a grasping part having a holder-step part and a stopper, and a pipe detachable to the container in an engaging direction of the stopper. Yamauchi et al discloses a cylindrical container and a holding mechanism including a grasping part (loading area 50 having grasping parts). Yoshida et al discloses feeder unit (29) having an end where the nozzle (inner tube 34) is arranged coaxially, an abutment surface directing downwardly and an engagement surface directing upwardly and holder means (mounting portion 16) including a stopper (lock device 53). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include such arrangement - a cylindrical container having an end where the nozzle is arranged coaxially with abutment and engagement surfaces, a holding mechanism including a grasping part having a holder-step part, a stopper and a pipe detachable to the container in an engaging direction of the stopper -

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in Maeda et al to retain the container (tank) in proper position and replace the feeder unit (container) in simplified manner.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yewebdar T Tadesse whose telephone number is (571) 272-1238. The examiner can normally be reached on Monday-Friday 8:00 AM-4: 30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Fiorilla can be reached on (571) 272-1187. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Yewebdar T. Tadesse
YTT

Curtis M. Yes
CURTIS M. YES
PRIMARY EXAMINER